

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Lutz BRUNNABEND

Serial No.: 10/824,437

Filed: April 15, 2004

For: CORRECTION SERVER FOR LARGE
DATABASE SYSTEMS

Examiner: Marie G. CABUCOS

Art Unit: 2163

Confirmation No.: 6301

Pre-Appeal Brief Request for Review

Mailstop: AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Responsive to the Office Action dated December 27, 2007, please consider the following remarks.

Summary of Invention and Status of Claims

The present invention provides systems and methods for identification of analytical results that may be rendered inconsistent due to correction of data entities upon which those results are dependent. This is accomplished through the use of a data flow manager that tracks when data entities are accessed and creates a read history relating each access to the analytical result that is dependent upon that data entity. If errors are discovered and corrected in a data entity, a correction manager creates a log of the corrected data entities. The log of corrected data entities may then be compared to the read history to determine which analytical results are dependent upon the corrected data entities, thereby revealing which analytical results are possibly inconsistent. These systems and methods provide an improved method of *tracking* accesses and error correction in a system which enables additional functionality, such as analysis based on historical data, review and filtering of data corrections, etc.

The claims of the present invention have been rejected as anticipated by Burfoot, U.S. Patent App. Pub. No. 2002/0188629 ("Burfoot"). However, as stated previously in Applicant's Response to the Final Office Action dated February 22, 2008, Burfoot discloses a system that is

different in several material respects. Burfoot discloses a method for automatic updating of information based on spreadsheets that are stored on a network resource. Because the network resource may be accessed by multiple users, access to and commitment of data to the network resource are synchronized to ensure data integrity. The objectives accomplished by the present invention would not be possible in the system of Burfoot because it does not disclose several important aspects of the present invention as claimed. For example, Burfoot does not disclose that read accesses are tracked and logged in a read history. Nor does Burfoot disclose the comparison of the read history to a correction log for identification of possibly inconsistent analytical results. In at least these respects, and as further explained below, Burfoot is not sufficient to anticipate the present claims.

Claims 1-19 are pending in this application. Claims 1, 9, 14, and 19 are independent. Claims 1-19 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Burfoot.

Claim Rejections under 35 U.S.C. §102(b)

Burfoot Fails to Disclose A Read History as Recited in the Claims.

To anticipate a claim, a reference must describe each and every element in the claim. *See* M.P.E.P. §2131. Claim 1 recites a system comprising, in relevant part:

a data flow manager, responsive to read requests from agents to the database, to store a read history identifying a relationship between the data entity being read and the analytical result.

Claims 9 and 14 recite similar features. The Examiner asserts that Burfoot discloses the recited data flow manager and correction server in his description of business logic and a calculation engine/spreadsheet peer, respectively. Applicants respectfully disagree.

As described in the specification at ¶ 9, “[t]he data flow manager 130 creates a ‘read history,’ a log of accesses identifying each database entity that was read from the payload database 110 and each entity that was created from the database entity.” The Examiner asserts that Burfoot discloses the recited data flow manager and read history in a discussion of a “spreadsheet peer” transmitting data between a persistence layer and a client at paragraphs 33-38 and 46. However, the spreadsheet peer merely uses traditional synchronization techniques to maintain consistent data. Burfoot at ¶ 0046. While Burfoot’s system may prevent concurrent data modification, there is no indication that it tracks read requests and creates a read history relating those read requests to a dependent analytical result.

Burfoot discloses that a client application may reference data stored on a DSS server, “[t]herefore, when the referred-to data changes, **the users’ spreadsheets will be automatically updated**, without requiring the user to do any work whatsoever.” Burfoot at ¶ 0042 (emphasis added). In contrast to the system described in Burfoot, an aspect of the present invention involves the logging of read requests for identification of analytical results which **may** be rendered inconsistent. Burfoot fails to describe storing any read history identifying a relationship between a data entity being read and an analytical result. For at least this reason, the claims are not anticipated by the cited reference.

Burfoot Fails to Disclose a Corrections Server as Recited in the Claims.

Claim 1 further recites, in relevant part:

a corrections server that, when corrections are made to the database, identifies corrected entities in a corrected entity log and **compares the corrected entity log against the read history** to identify analytical results **rendered possibly inconsistent** due to the correction.

Claims 9 and 14 recite similar features. Claim 19 recites a third database to store a list of uncorrected data entries **identified as potentially inconsistent**. The Examiner asserts that Burfoot discloses these features at paragraphs 0045-46. Applicants respectfully disagree. Burfoot merely describes a DSS server that performs calculations and provides the resulting values to clients. There is no suggestion that the DSS server or its calculation engine ever compares a corrected entity log to a read history or identifies possibly-inconsistent results resulting from a correction made to a database.

It is unsurprising that Burfoot lacks a correction server, since his system has other techniques for maintaining data consistency. In Burfoot’s system, clients are not allowed to make changes that might create inconsistent data. See Burfoot at ¶ 0045-46. Thus, Burfoot avoids data inconsistencies by **preventing** concurrent modification by multiple clients. In contrast, the present invention allows for an operator to review a change in a data entity to determine whether the change will indeed result in an inconsistency in the analytical result. See Specification at ¶ 25-28. Burfoot’s system fails to describe identifying analytical results rendered possibly inconsistent due to a correction or any similar feature and, therefore, fails to disclose each and every feature of the claims.

The Final Office Action Fails to Address Each Feature of Claims 9 and 14.

Claims 9 and 14 further recite, in relevant part:

responsive to a request to correct a first database entity, **creating a second database entity** that is **a corrected copy** of the first database entity.

This limitation of claims 9 and 14 is not addressed in either of the Final Office Action or Advisory Action. Because a reference must describe each and every element in the claim to anticipate a claim (*see* M.P.E.P. §2131), Applicant respectfully submits that the Office has not met its burden of providing a *prima facie* case of anticipation.

Burfoot Fails to Disclose the Features Recited in Claim 19.

Claim 19 recites, in relevant part:

a first database...; and

a correction manager...comprising:

a second database to store a list of corrected data entries in the first database; and

a third database to store a list of **uncorrected data entries** identified as potentially inconsistent **due to a correction performed on an entity listed in the second database**.

The Examiner asserts that Burfoot's web server is the recited second database, and Burfoot's persistence layer is the recited third database. This is incorrect. To anticipate the recited second database, Burfoot's web server would have to store a list of corrected data entries in the first database. However, Burfoot lacks any indication or suggestion that the web server stores data at all. The web server merely passes information between clients and the rest of the DSS system. Burfoot at ¶ 0040. Further, the differences between web servers and databases are well-known in the art, and are explicitly described in Burfoot at ¶ 0032, 0040. Burfoot does not suggest that his web server also functions as a database, and one of skill in the art would not reasonably interpret the described web server to be a database.

The Office Action also fails to show how Burfoot discloses the recited third database. According to the Examiner's analysis, Burfoot's persistence layer would have to store a list of uncorrected data entries identified as potentially inconsistent due to a correction performed on an entity listed in a second database (the web server, as interpreted by the Examiner). Even if the web server stores the recited list of corrected data entries, which Applicants do not concede, there is no suggestion anywhere in Burfoot that the persistence layer stores a list of **uncorrected** entries based on the list of **corrected** entities. These features are simply absent

from Burfoot's disclosure. Thus, Burfoot's system lacks at least the second and third databases as recited in the claims and, for at least this reason, fails to anticipate the claim.

Further, to anticipate a claim a reference must disclose each and every element of the claim, **and** the elements must be arranged as required by the claim. *See* M.P.E.P. §2131. The Examiner interprets Burfoot's business logic, web server, and persistence layer as the recited correction manager, second database, and third database, respectively. Claim 19 recites that the correction manager comprises the second and third databases. However, Burfoot's business logic does not comprise or contain the web server and persistence layer. As shown by Burfoot's Figure 1 and as described in paragraphs 0031-38, the business logic, web server, and persistence layer are **separate components** of the DSS server. There is simply no indication that Burfoot's business logic comprises a web server and a persistence layer, or that any similar configuration is possible in Burfoot's system. Thus, the reference fails to disclose all the elements, arranged in the same way, as recited in the claim.

Conclusion

In light of the above discussion, Applicant respectfully submits that the Office has not met its burden of providing a *prima facie* case of anticipation. Therefore, Applicant requests that the Final Office Action be withdrawn and a new Office Action be issued.

The Office is hereby authorized to charge any fees required under 37 C.F.R. § 1.16 or § 1.17 or credit any overpayments to Deposit Account No. 11-0600. The Office is invited to contact the undersigned at 202-220-4200 to discuss any matter regarding this application.

Respectfully submitted,

Date: April 28, 2008

/Brett N. Watkins/

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| PRE-APPEAL BRIEF REQUEST FOR REVIEW | | Docket Number (Optional) 11884-412001 | | | |
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| | First Named Inventor Lutz Brunnabend | | | | |
| | Art Unit 2163 | Examiner CABUCOS, MARIE G | | | |
| <p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <table style="width: 100%; border: none;"><tr><td style="width: 50%; vertical-align: top;"><div style="margin-bottom: 10px;"><input type="checkbox"/> applicant/inventor.</div><div style="margin-bottom: 10px;"><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</div><div style="margin-bottom: 10px;"><input checked="" type="checkbox"/> attorney or agent of record. 60,458 Registration number _____</div><div><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</div></td><td style="width: 50%; vertical-align: top; border-left: 1px solid black; padding-left: 10px;"><div style="margin-bottom: 10px; text-align: center;">/Brett N. Watkins/ _____ Signature Brett N. Watkins _____ Typed or printed name (202) 220-4430 _____ Telephone number April 28, 2008 _____ Date</div></td></tr></table> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p> | | | | <div style="margin-bottom: 10px;"><input type="checkbox"/> applicant/inventor.</div> <div style="margin-bottom: 10px;"><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</div> <div style="margin-bottom: 10px;"><input checked="" type="checkbox"/> attorney or agent of record. 60,458 Registration number _____</div> <div><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</div> | <div style="margin-bottom: 10px; text-align: center;">/Brett N. Watkins/ _____ Signature Brett N. Watkins _____ Typed or printed name (202) 220-4430 _____ Telephone number April 28, 2008 _____ Date</div> |
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